ADVC300

User Manual

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Cautions

Please observe the following cautions when using this product. If you have any questions regarding the method of usage, the descriptions herein, or any other concerns, please contact the your local Grass Valley office or distributor.

DANGER

The following conditions indicate the potential for serious bodily injury or loss of life.

Health precautions

In rare cases, flashing lights or stimulation from the bright light of a computer monitor display may trigger temporary epileptic seizures or loss of consciousness. It is believed that even individuals whom have never experienced such symptoms may be susceptible. If you or close relatives have experienced any of these symptoms,consult a doctor before using this product.

Do not use in environments requiring a high degree of reliability and safety

This product is not to be used in medical devices or life support systems. The characteristics of this product are not suited for use with such systems.

Protect against static electricity

An electrostatic discharge may damage components of this product. Do not directly touch any of the connectors or component surfaces.
Static electricity can be generated on clothing and on people. Before handling the product, discharge static electricity from your body by touching a grounded metal surface.

Do not disassemble

Do not remove the cover or modify the ADVC-300. Fire, electric shock or malfunction may result. For internal inspection or repair, please contact your system integrator or Grass Valley directly.

Do not operate at other than the specified voltage

Do not operate at other than the specified voltages of AC 100-240V. Operation another than the rated voltage may result in fire or malfunction.

Do not operate with other than the specified power supply

Do not operate with other than the specified AC adapter, or with a car power supply. Such operation may result in fire or malfunction.

Handle the AC adapter cord carefully

Do not place heavy objects on top of the cord, or place it near hot objects. Doing so may damage the cord and result in fire, electrical shock, or malfunction. Altering the cord, or excessively bending or pulling the cord may result in fire or electrical shock.If the cord is damaged, please contact your local retail outlet or Grass Valley directly.

* Replacement of damaged parts, unless defective due to manufacturing, will be charged at actual cost plus handling fees.

Do not use the product in a dusty or humid environment

It may cause short-circuit or build-up of heat, resulting in fire or electric shock.

Do not let foreign matters enter the inside of the product

If water or any foreign matter enters the inside of the product, it may cause fire or electric shock. In case where water or foreign matter is allowed to enter the product, turn the power OFF and pull out the power cable from the receptacle, and then contact your local Grass Valley distributor or our customer support personnel.

Do not use the product when you hear thunder

Do not touch the product body or its plug on such occasions. It may result in electric shock.

Stop using the product when it is smoking

Do not use the product in an abnormal condition like it is smoking or emitting an odor.
It may result in fire or malfunction of the product. If any anomaly is found, turn OFF the power of the product, disconnect the power cable, and contact your local Grass Valley distributor or our customer support personnel after making sure that the product is not smoking any more.

Do not use the product in a damaged condition

Do not drop the product nor use the product with its cover broken.
It may result in fire or malfunction of the product. In case the product is damaged, turn OFF the power of the product and pull out the power cable from the receptacle, and then contact your local Grass Valley distributor or our customer support personnel.

BE SURE TO USE THE ATTACHED DV(FIREWIRE) CABLE

If at all possible, please use the included DV(Firewire) cable. Use of other cables may cause a transmission error. In the worst case, the ADVC-300 or other connected equipment may be damaged internally due to faulty cable wiring.

LOWER THE VOLUME OF THE AUDIO EQUIPMENT

Please lower your audio equipment speaker level that is connected with the ADVC-300 when you turn the power of the ADVC-300 ON/OFF. You may hear a loud noise when you turn the power ON/OFF.

CAUTION

The following conditions indicate the potential for bodily harm, damage to hardware or loss of data.

Do not pull AC adapter cord when disconnecting from electrical outlet

When disconnecting the AC adapter cord, pull on the plug, not the cord itself. Pulling on the cord can damage the cord and may result in fire or electric shock.

Do not touch AC adapter with wet hands

Do not disconnect or plug in the AC adapter when your hands are wet. Contact with water may result in electric shock, fire or damage.

Do not setup in an area that becomes hot

Do not setup in an area exposed to direct sunlight or near a heating apparatus. The heat can accumulate, causing burns, fire or damage. Also, the unit may become deformed or change color.

Do not setup other than the Described method

Do not setup in a manner other than prescribed. Do not use while wrapped in cloth or plastic. Heat can accumulate, causing burns, fire or damage.

If product will not be used for an extended period

If this product will not to be used for an extended period of time, disconnect the AC adapter from the electrical outlet.

Do not place the product on an unstable place

Do not place the product on an unstable table or slanted surface. The product may fall from it, resulting in injuries or malfunction of the product.

Turn OFF the power when cleaning the product

When making connections with the product or cleaning the product, be sure to disconnect the power plug beforehand. Failure to do so may result in electric shock or malfunction of the product. When cleaning the product, do not use volatile solvents such as thinner.

Route the cables properly

Route the power cable and AV cables properly. If they catch the feet, it may result in injuries or malfunction of the product.

FCC Notice

This equipment has been tested and found to comply with the limits for the class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Declaration of Conformity

According to FCC Part 15

Responsible Party Name: Canopus Co.,Ltd.

Address: 1-2-2 Murotani Nishi-ku, Kobe-city Hyogo 651-2241 Japan

Telephone: +81-78-992-5846

Declares that productModel: ADVC-300

Complies with Part 15 of the FCC Rules.

Product Notes

1. Unauthorized copying of a portion or the entirety of this product is prohibited.
2. The description and specifications of this product are subject to future change without notice.
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About the Documentation

This document is the ADVC-300 User Manual.

Information not listed in this document may be listed elsewhere.

In cases where there is a difference between a description in this document and an actual operation method, the actual operation method takes precedence.

This document is written for users capable of performing basic PC operations. If there is no special description of an operation, perform that operation in the same manner as a general PC operating.

In this manual, Microsoft® Windows®2000 Operating System and Microsoft® Windows®XP Operation System are referred to as Windows 2000 and Windows XP (both Home and Professional Editions) respectively. In this manual, Mac OS X 10.2.x and Mac OS X 10.3 are referred to as Mac OS X.

To simplify the descriptions, the actual product may differ from the illustrations and screenshots.

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ADVC300

ADVC-300 features

D1 terminal output

Component analog output is supported via the D1 connector.

Compatible with SECAM format

ADVC-300 is compatible with any video format.

Input: NTSC, PAL, and SECAM are supported.
Output: NTSC and PAL are supported.

Image and sound quality adjustment software

This product is includes with Picture Controller 300, which lets you adjust the quality of image and sound in a snap from Windows or Macintosh.

Color bar signal output feature

The ADVC-300 outputs color bars for reference signal from analog video output. It is handy for making adjustments on images.

* Color bars are not output from DV.

Image and sound stay in sync: Locked Audio

ADVC-300 has employed the Locked Audio technology, which digitizes audio samples keeping the pace with video frame. Because video and audio data are in sync, the analog audio does not get behind the video. You can feel assured that your video and audio stay in sync even when you convert lengthy video contents such as a movie.

Tip

The Locked Audio feature is effective only in analog-to-digital conversion. It does not work in digital-to-digital conversion.

Tip

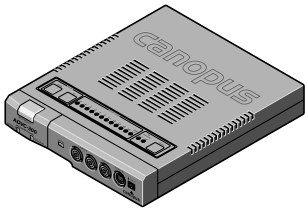
What is the configuration save feature?
This feature enables the ADVC-300 to save the current configuration into the internal Flash memory when its power is turned OFF and call up that configuration when it is powered next time. This feature is utilized for input modes and other settings.

Package Contents

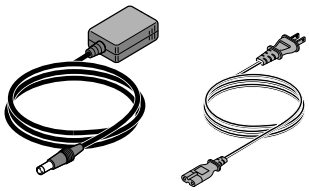
The product package includes the following accessories.

Items included in ADVC-300 package

- ADVC-300

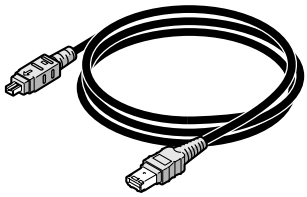


- AC adapter and cable



* The shape of the plug may differ depending on your point of perchase.

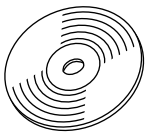
- DV cable (6-pin to 4-pin)



- Component cable

- ADVC-300 User Manual (this document)

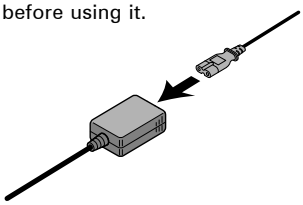
- CD-ROM



* This programs can be used only when you agree to the contents of Software End User License Agreement displayed at installation. Be sure to confirm the contents of End User License Agreement.

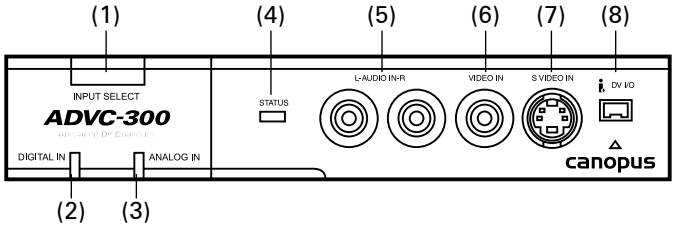
Tip

As the AC adapter comes in a form that the adapter unit and cable (to receptacle) are separated each other, connect them before using it.



Names and functions of components

Front



(1) [INPUT SELET] switch

This switch sets the input mode to either of DV or analog. The switch toggles between the following two modes:

- Analog > DV > Analog

* If the [INPUT SELECT] switch is held down for about 3 seconds, color bars are output. Pressing the switch once again returns you to the DV input mode.

(2) [DIGITAL IN] LED

Lights while the ADCV-300 is receiving signals from the DV terminal and converting them to analog signals.

(3) [ANALOG IN] LED

Lights while the ADVC-300 is receiving signals from the analog terminal and converting them to DV signals.

(4) STATUS LED

Lights in red when the Macrovision signal or any anomaly has been detected.
When the standby feature has been enabled, this LED lights in green if the ADVC-300 enters the standby mode.

(5) AUDIO IN L/R

Terminal for analog audio input.

(6) VIDEO IN

Terminal for composite video input.

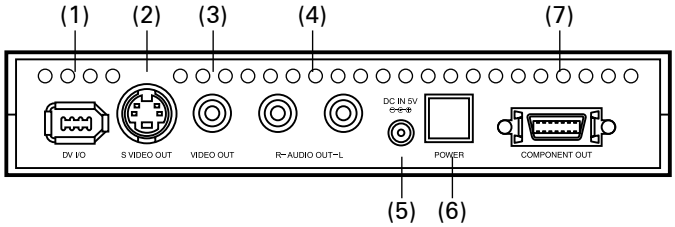
(7) S-VIDEO IN

Terminal for S-video input.

(8) DV IN/OUT

Terminal for DV connection (4-pin). Connect this terminal to a DV device or computer.

Rear



NOTE

Please do not connect DV camcorders to DV connectors on both sides at the same time. This operation is not supported.

(1) DV IN/OUT

Terminal for DV connection (6-pin). Connect this terminal to a DV device or computer.

(2) S-VIDEO OUT

Terminal for S-video output.

(3) VIDEO OUT

Terminal for composite video output.

(4) AUDIO OUT L/R

Terminal for analog audio output.

(5) DC IN 5V

Connect the AC adapter that comes with the product to this terminal.

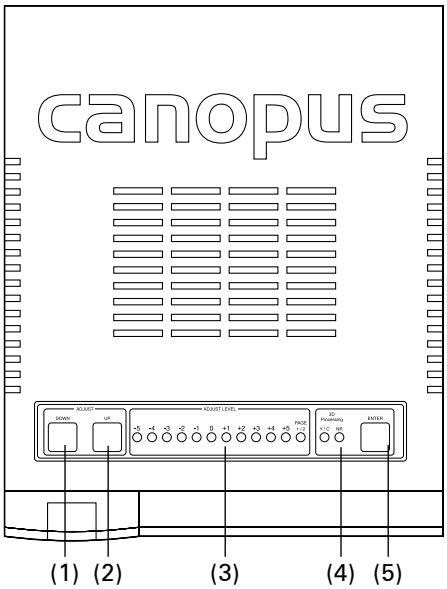
(6) [POWER] switch

Allows you to turn ON/OFF the ADVC-300.

(7) COMPONENT OUT

Terminal for D1 output.

Top



(1) [ADJUST DOWN] switch

When selecting an item to set up, pressing this switch moves the ADJUST LEVEL LED's current indication to the left by one. When adjusting the quality of image or sound, pressing this switch decreases the setting value by one.

(2) [ADJUST UP] switch

When selecting an item to set up, pressing this switch moves the ADJUST LEVEL LED's current indication to the right by one. When adjusting the quality of image and sound, pressing this switch increases the setting value by one.

(3) ADJUST LEVEL LED

Shows the value for the image quality setting or sound quality setting, etc.

(4) 3D Processing LED

Y/C LED

Lights when 3D Y/C separation is activated for processing analog composite inputs.

* Since S-video inputs come with the luminance (Y) and chrominance (C) signals separated each other from the start, Y/C separation is not applied to them and thus this LED does not light.

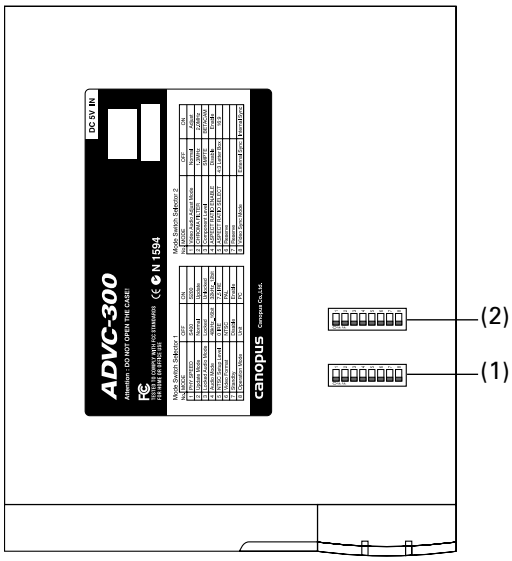
NR LED

Lights when 3D noise reduction is activated.

(5) [ENTER] switch

Use this switch to acknowledge the setting you made.

Bottom



(1) [SW1] DIP switches

DIP switches for setting VIDEO and AUDIO modes.

(2) [SW2] DIP switches

DIP switches for making video settings.

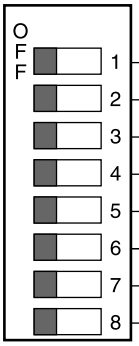
NOTE

Before changing the DIP switch settings, be sure to turn the power OFF.

Setting up ADVC-300

[SW1] DIP switches

Allow you to set various modes. No.5, No.6 may differ depending on your point of perchase.



No.	MODE	OFF	ON
1	PHY SPEED	S400	S200
2	Update Mode	Normal	Update
3	Locked Audio Mode	Locked	Unlocked
4	Audio Mode	48kHz_16bit	32kHz_12bit
5	NTSC Setup Level	0 IRE	7.5 IRE
6	Video Format	NTSC	PAL
7	Standby	Disable	Enable
8	Operation Mode	UNIT	PC

No.1 PHY Speed setting

Allows you to set the PHY Speed. (Usually, set to S400.)

OFF: S400 ON: S200

No.2 Update Mode setting

Allows you to set Update Mode. (Usually, set it to Normal.)

OFF: Normal ON: Update

No.3 Locked Audio Mode setting

Allows you to select whether to use the Locked Audio mode or not. (Refer to P. 49.)

OFF: Locked ON: Unlocked

No.4 Audio Mode setting

Allows you to select audio frequency.

OFF: 48kHz/16bit ON: 32kHz/12bit

No.5 NTSC Setup Level setting

Allows you to set the black (setup) level. This switch is effective only in the NTSC format.

OFF: 0 IRE ON: 7.5 IRE (North America, South Korea)

No.6 Video Format setting

Allows you to select video signal format.

OFF: NTSC ON: PAL

When both of No.5 NTSC Setup Level and No.6 Video Format are set to ON, the SECAM format is used.

* At this time, the SECAM format is used for input and PAL format for output.

No.7 Standby setting

Allows you to set whether to use the standby feature (which detects the signal coming from devices connected to the DV terminal).

OFF: Disable ON: Enable

*** Standby feature**

This feature turns ON/OFF the ADVC-300 power automatically after detecting ON/OFF of the power of the device connected to the DV terminal.

You can use the [POWER] switch to turn ON/OFF the ADVC-300 power as usual even when the standby feature is active.

NOTE

When you use the standby feature, use either of the DV terminal on the front or the one on the rear, not both, for connecting your device.

* Depending on the specification of your device's (computer's) DV terminal standby function or the OHCI card specification, the standby mode may not work.

No.8 Operation Mode setting

Allows you to select the control method of ADVC-300.

OFF: UNIT ON: PC

*** UNIT mode**

In this mode, the ADVC-300 operates standalone, thus all the operations are made via the buttons and indicators on it. To set the operation mode, use the DIP switch for it. You can set up the quality of image and sound on the ADVC-300. This mode is provided for using the ADVC-300 as a simple DV converter.

*** PC mode**

In this mode, the ADVC-300 is controlled by a computer connected to it via the IEEE 1394 interface. Image and sound quality is controlled from the computer. The buttons on the ADVC-300 are not operable in this mode.

Tip

Operation Mode

The PC mode and UNIT mode are available for your selection.

When changing the mode, be sure to turn OFF the ADVC-300 power before setting the DIP switch.

Tip

The following functions are changeable under the PC mode. The set values are saved in the ADVC-300's memory.

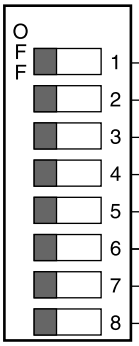
- Locked Audio Mode ([SW1] DIP switch No. 3)
- Audio Mode ([SW1] DIP switch No. 4)

The following functions are not changeable from the PC.

- NTSC Setup Level ([SW1] DIP switch No. 5)
- Video Format ([SW1] DIP switch No. 6)
- Chroma Filter ([SW2] DIP switch No. 2)
- Component Level ([SW2] DIP switch No. 3)
- Aspect Ratio Enable ([SW2] DIP switch No. 4)
- Aspect Ratio Select ([SW2] DIP switch No. 5)
- Video Sync Mode ([SW2] DIP switch No. 8)

[SW2] DIP switches

Allows you to make video and audio settings.
All the switches have been set to OFF at the time of shipment.



No.	MODE	OFF	ON
1	Video Audio Adjust Mode	Normal	Adjust
2	CHROMA FILTER	1.3MHz	2.0MHz
3	Component Level	SMPTE	BETACAM
4	ASPECT RATIO ENABLE	Disable	Enable
5	ASPECT RATIO SELECT	4:3LetterBox	16:9
6	Reserved		
7	Reserved		
8	Video Sync Mode	External Sync	Internal Sync

No.1 Video Audio Adjust Mode setting

Allows you to enable the adjustment on image and sound quality. Usually, set this to [OFF: Normal] (Refer to P. 22).

OFF: Normal ON: Adjust

No.2 Chroma Filter Setting

Allows you to select the Chroma filter.

OFF: 1.3 MHz ON: 2.0 MHz

No.3 Component Level setting

Allows you to select the component level from SMPTE and BETACAM.

OFF: SMPTE ON: BETACAM

No.4 Aspect Ratio Enable setting

Allows you to enable the aspect ratio setting (No.5 Aspect Ratio Select). If set to [OFF: Disable], the aspect ratio of "4:3" is used for D1 output.

OFF: Disable ON: Enable

No.5 Aspect Ratio Select setting

Allows you to select the aspect ratio for D1 output.

OFF: 4:3 LetterBox ON: 16:9

No.6 Reserved

Not used (Usually, set it to [OFF].)

No.7 Reserved

Not used (Usually, set it to [OFF].)

No.8 Video Sync Mode setting

Allows you to select whether to enable the PLL (phase-locked loop) control or not. This switch is effective only for DV inputs.

OFF: External Sync ON: Internal Sync

If set to [OFF: External Sync], the ADVC-300 synchronize the frame and subcarrier period of analog video to be output with the pulses of the incoming DV stream. If set to [ON: Internal Sync], the ADVC-300 uses its internal circuit to determine the frame period of the analog video to be output.

Tip

- The image and sound quality adjustments for external inputs is commonly applied to both of S-video and composite inputs.
- You cannot adjust DV input devices using this feature.
- The settings specified in the image quality adjustment are applied when analog data is converted to DV data.

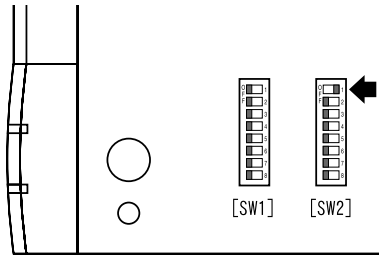
Adjusting image and sound quality

ADVC-300 is equipped with the image and sound quality adjustment feature. You can save one setting for external (LINE) inputs.

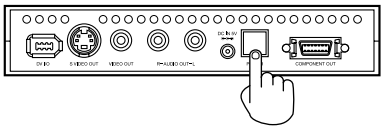
1 **Set the ADVC-300 [POWER] switch to [OFF].**

2 **Set the [SW2] DIP switch No. 1 to [ON].**

> The Video Audio Adjust Mode will be set to [Adjust].

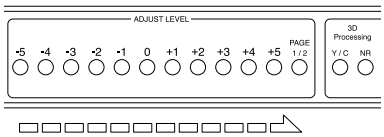


3 **Set the [POWER] switch to [ON].**



> The [ADJUST LEVEL] LEDs will light in series in the direction from [-5] to [PAGE1/2] twice. After that, LED [-5] will blink.

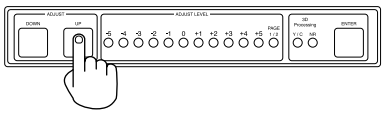
> [3D Processing] LEDs, [Y/C] and [NR] turn off.



> The ADVC-300 will enter the image and sound quality adjustment mode and be put to the standby state.

4

Select your desired item to adjust by pressing the [ADJUST UP] or [ADJUST DOWN] switch.



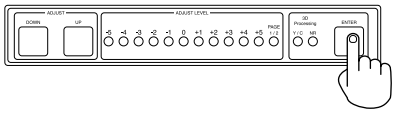
LED	Desired item	Note
PAGE1[−5]	Image and sound	Default setting
PAGE1[−4]	Brightness	256 levels
PAGE1[−3]	Contrast	256 levels
PAGE1[−2]	Hue	256 levels
PAGE1[−1]	Saturation	256 levels
PAGE1[0]	Sharpness	256 levels
PAGE1[+1]	Volume	256 levels
PAGE1[+2]	Low tone	31 levels
PAGE1[+3]	High tone	31 levels
PAGE1[+4]	Image	Default setting
PAGE1[+5]	Sound	Default setting
PAGE1[−5]	Y/C separation setting	4 options
PAGE1[−4]	Audio AGC setting	5 levels

Tip

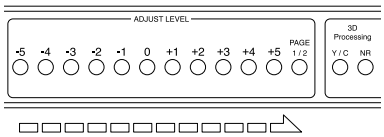
To change the page, select [PAGE1/2], and then press the [ENTER] switch. If the page is switched to page 2, the [PAGE1/2] LED lights up.

5

Press the [ENTER] switch to select the currently chosen item



> The [ADJUST LEVEL] LEDs will light in series from [-5] to [PAGE1/2] twice, and then the current setting value (previously saved value) will be indicated.

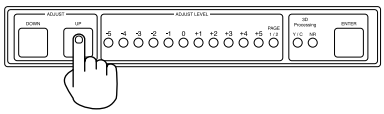


> **PAGE1[-5]: When the image and sound default setting has been selected:**
All the LEDs of [ADJUST LEVEL] and [3D Processing] will blink at the same time. Proceed to step 7.

> **PAGE1[+4]: When the image default setting has been selected:**
All the LEDs of [ADJUST LEVEL] will blink at the same time. Proceed to step 7.

> **PAGE1[+5]: When the sound default setting has been selected:**
The two LEDs of [3D Processing] will blink at the same time. Proceed to step 7.

6 Adjust the setting value by pressing the [ADJUST UP] or [ADJUST DOWN] switches.



Setting items	LED	–5	–4	–3	–2	–1	0	1	2	3	4	5
	Settable values	0~	24~	47~	70~	93~	116~	140~	163~	186~	209~	232~255
Brightness	Low < Default 128 < High											
Contrast	Low < Default 128 < High											
Hue	Green < Default 128 < Red											
Saturation	Light < Default 128 < Deep											
Sharpness	Weak < Default 128 < Strong											
Volume	Low < Default 237 < High											

Setting items	LED	–5	–4	–3	–2	–1	0	1	2	3	4	5
	Settable values	–15~	–14~	–9~	–6~	–3~	0	1~	4~	7~	10~	13~15
Low tone	Weak < Default 0 < Strong											
High tone	Weak < Default 0 < Strong											

Setting items	LED	–5	–4	–3	–2	–1
Y/C separation setting	Y/C	OFF	2D	3D	3D	
	NR	OFF	3D	OFF	3D	
Audio AGC setting AGC Level	AGC Level	OFF	1	2	3	4

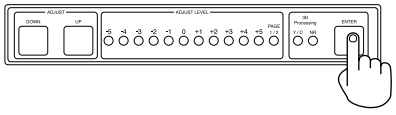
Tip

You can increase or decrease the value continuously by holding down the [ADJUST UP] or [ADJUST DOWN] key.

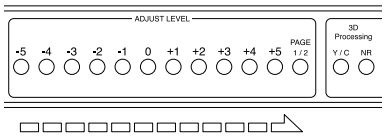
Tip

If the value for the volume setting has been set high, the sound may be distorted when the ADVC-300 processes an input source with a high volume level.

7 Press the [ENTER] switch to set to the current choice.



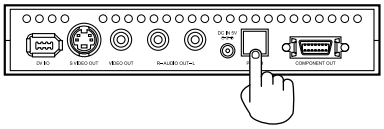
> The setting will be updated.
> The [ADJUST LEVEL] LEDs will light in series from [-5] to [PAGE1/2] twice, and then [-5] LED will blink.



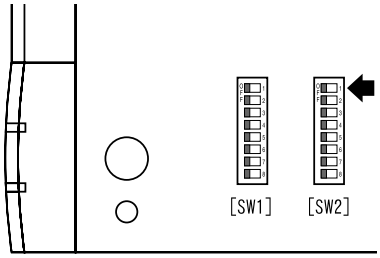
Tip

Repeat steps 4 to 7 if you want to set up another item.

8 **Set the ADVC-300 [POWER] switch to [OFF].**



9 **Set the [SW2] DIP switch No. 1 to [OFF].**



> The Video Audio Adjust Mode will be set to [Normal].
> This completes the setup procedure.

Installing Picture Controller 300

System requirements

Grass Valley does not guarantee all system meeting the below requirements to work accordingly with the ADVC-300.

Computer

The following are the minimum requirements for using this product.

Windows
- CPU: Pentium III or faster
- Memory: 128 MB or more
- CD-ROM drive: Required to set up the software.
- HDD: 4 MB or more of available space for installing the software
- To use Picture Controller 300, an OHCI (IEEE1394) interface is required.

Macintosh
- CPU: G3 or faster
- Memory: 128 MB or more
- CD-ROM drive: Required to set up the software.
- HDD: 4 MB or more of available space for installing the software
- Your Mac needs a standard FireWire port to use Picture Controller 300.

Supported OS

Windows
- Windows 2000 Professional + SP4
- Windows XP Home/Professional Edition + SP1
  *DirectX 8 or later is required.

Macintosh
- Mac OS X 10.2.7 or later

Installation (for Windows)

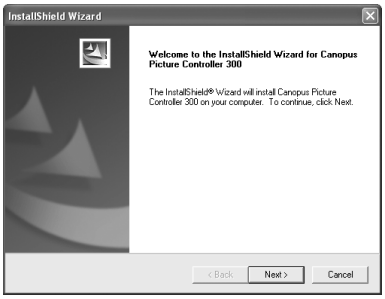
The following describes the procedure for installing Picture Controller 300 on a computer running Windows XP.

* You can install Picture Controller 300 without ADVC-300 connected with the computer.

Tip

Do not remove the "ADVC-300 Applications CD" from the CD-ROM drive until the installation is completed.

1 **Insert the "ADVC-300 Applications CD" into the CD-ROM drive.**


InstallShield Wizard
Welcome to the InstallShield Wizard for Canopus Picture Controller 300
The InstallShield® Wizard will install Canopus Picture Controller 300 on your computer. To continue, click Next.
< Back
Next >
Cancel

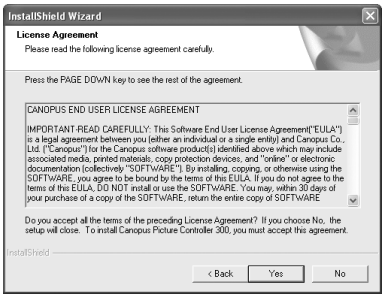
> The CD-ROM automatically starts up and the installation screen is displayed.

* When the CD-ROM does not automatically start up, run "ADVC-300 Applications CD" > [PCtrl300] > [Steup.exe].

2 **Click [Next].**

3 **When the License Agreement is displayed, carefully read the content and click [Yes] only if you agree to them. If you do not agree to the License Agreement, click [No] to stop installation and notify our customer support personnel in writing.**

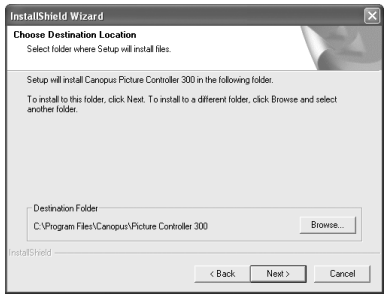
* If you do not agree to the License Agreement, you cannot use this software.


InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
CANOPUS END USER LICENSE AGREEMENT
IMPORTANT-READ CAREFULLY: This Software End User License Agreement("EULA") is a legal agreement between you (either an individual or a single entity) and Canopus Co., Ltd. ("Canopus") for the Canopus software product(s) identified above which may include associated media, printed materials, copy protection devices, and "online" or electronic documentation (collectively "SOFTWARE"). By installing, copying, or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, DO NOT install or use the SOFTWARE. You may, within 30 days of your purchase of a copy of the SOFTWARE, return the entire copy of SOFTWARE
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install Canopus Picture Controller 300, you must accept this agreement.
InstallShield
< Back
Yes
No

4

Click [Next].

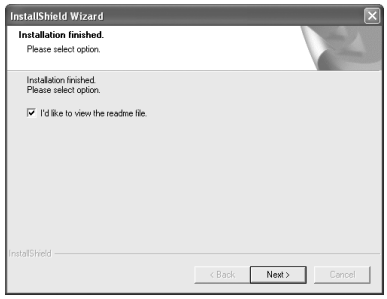
* If you want to change the folder where the program will be installed into, click [Browse...] and specify your desired folder.


InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install Canopus Picture Controller 300 in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\Canopus\Picture Controller 300
Browse...
InstallShield
< Back
Next >
Cancel

> The installation process starts.

5

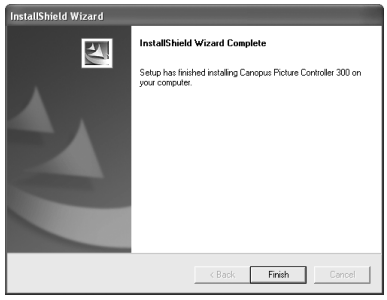
Select your desired options and click [Next].



> Be sure to read the readme file since it contains content not covered in the manuals.

6

Click [Finish].



> This completes the installation of Picture Controller 300.

Tip

ADVC-300 comes with the "ProCoder Demo version". When you want to install "ProCoder Demo", run "ADVC-300 Applications CD" > [ProCoder Trial] > [ProCoderDemo_1_25.exe].

Installation (for Macintosh)

The following describes the procedure for installing Picture Controller 300 on a computer running Mac OS X.

* You can install Picture Controller 300 without ADVC-300 connected with the computer.

Tip

Do not remove the "ADVC-300 Applications CD" from the CD-ROM drive until the installation is completed.

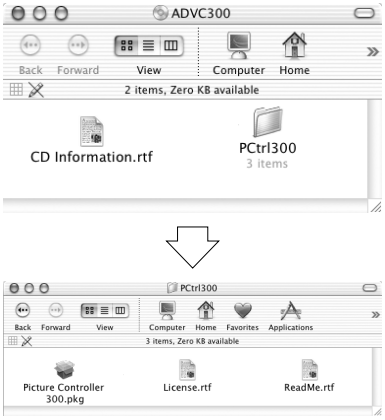
1

Insert the "ADVC-300 Applications CD" into the CD-ROM drive.

> The [ADVC300] icon will appear.

2

Run [ADVC300] > [PCtrl300] > [Picture Controller 300.pkg].



> The installer starts up.

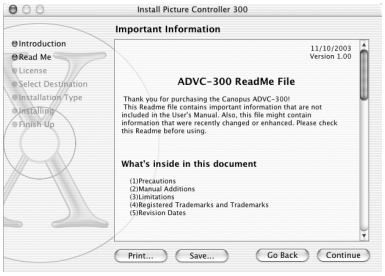
3

Enter your name and password, and then click [OK].

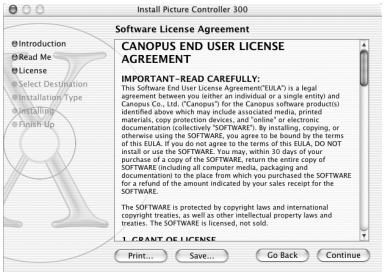
4 Click [Continue].

5 Read the content carefully, and click [Continue].

> Be sure to read the readme file since it contains content not covered in the manuals.



6 Click [Continue].



> The License Agreement will be displayed.

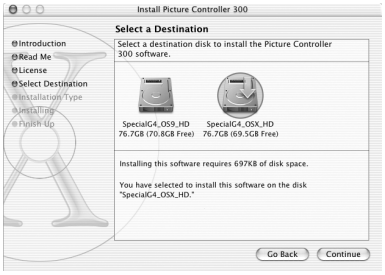
Read the content carefully and click [Agree] only if you agree to it.

> If you do not agree to the License Agreement, click [Disagree] to stop installation and notify our customer support personnel in writing.

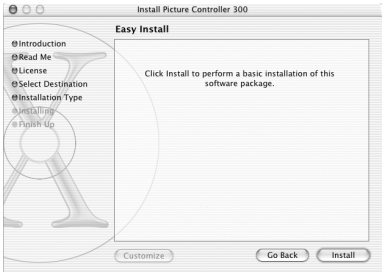
* If you do not agree to the License Agreement, you cannot use this software.

To continue installing the software, you must agree to the terms of the software license agreement.
Click Agree to continue or click Disagree to cancel the installation.
Disagree
Agree

7 Select the destination folder for installation, and then click [Continue].



8 Click [Install].



> The installation process starts.

9 After the installation completes, click [Close].

> The [Picture Controller 300] folder is created in the [Applications] folder.

How to use Picture Controller 300

NOTE

Do not turn ON/OFF the ADVC-300 power when the computer connected to the ADVC-300 via a DV cable is OFF or in a standby mode.

Tip

Picture Controller 300 lets you adjust the image and sound quality of streams coming from the computer via the DV terminal. These settings are effective even after the ADVC-300 is turned OFF or disconnected from the computer.

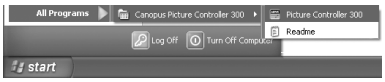
NOTE

When the ADVC-300 power is OFF, set the [SW1] DIP switch No. 8 to [ON: PC] (PC mode) beforehand (Refer to P.19).

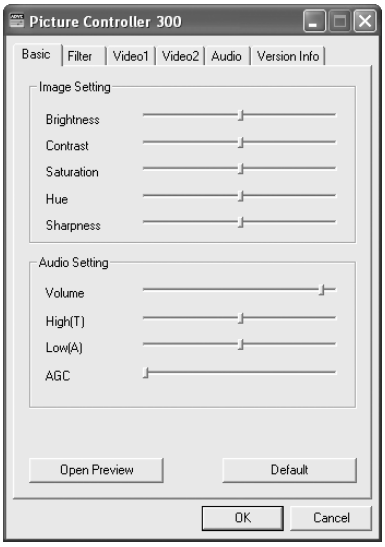
For Windows

1 **Connect the ADVC-300 to the computer, boot up the computer, and set the [POWER] switch to [ON].**

2 Click the [Start] menu, point to [All Programs], and click [Canopus Picture Controller 300].



> Picture Controller 300 will start up.



Tip

- **About Picture Controller 300 setup screen (Refer to P. 37 to 45)**

[Open Preview] ([Close Preview]) button
Opens the preview screen (closes the preview screen).

[Default] button
Reverts the setting to the default.

[OK] button
Saves the current setting and exits Picture Controller 300.

[Cancel] button
Exits Picture Controller 300 without saving the current setting.

NOTE

When the ADVC-300 power is OFF, set the [SW1] DIP switch No. 8 to [ON: PC] (PC mode) beforehand (Refer to P.19).

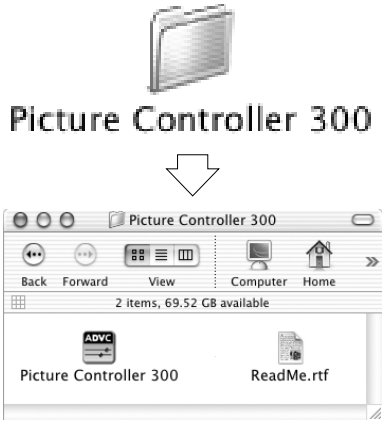
Tip

- **About Picture Controller 300 setup screen (Refer to P. 37 to 45)**
  [Preview] button
  Opens the preview screen.
  [Default] button
  Reverts the setting to the default.
  [Restore] button
  Restores the previously saved setting.
- Picture Controller 300 setup items for Windows and the ones for Macintosh are identical.
  * Screenshots of tab pages shown in this manual are the ones for Windows.

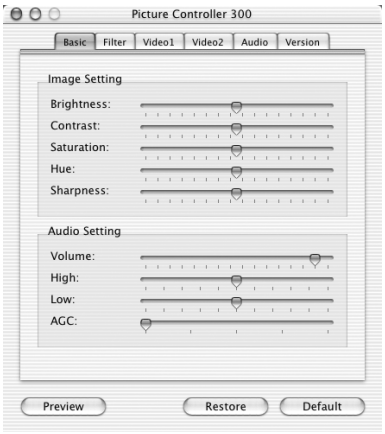
For Macintosh

1 **Connect the ADVC-300 to the computer, boot up the computer, and set the [POWER] switch to [ON].**

2 **Click [Picture Controller 300] in the [Picture Controller 300] folder.**

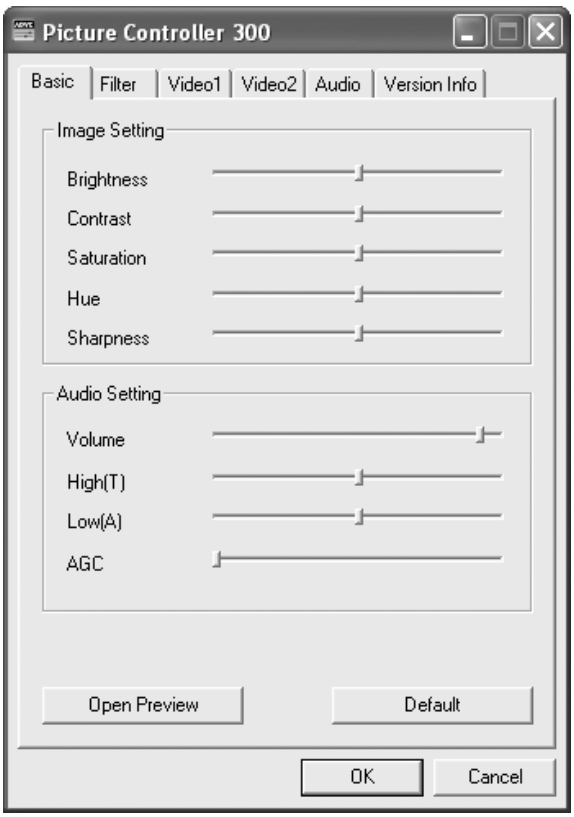


> Picture Controller 300 will start up.



[Basic] tab

This tab page is provided for adjusting the image and sound quality.



- **Image Setting**

  Allows you to adjust the brightness, contrast, saturation, hue, and sharpness of your video.

- **Audio Setting**

  Allows you to adjust the volume, high and low tones and AGC gain of video.

Tip

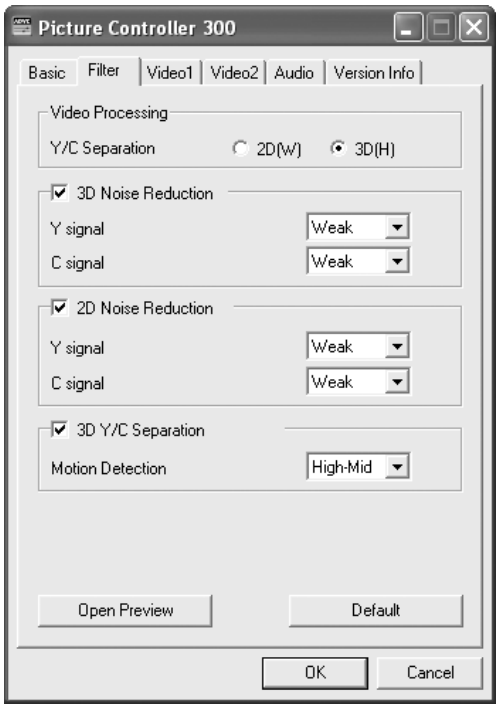
Audio Setting: AGC gain
The sound volume is automatically adjusted by this feature. You can set the level of AGC automatic adjustment.

[Filter] tab

This tab page is provided for setting up Y/C separation and DNR.

NOTE

When the S-video input, Y/C separation of the [Filter] tab can not set.



- **Video Processing**

[Y/C Separation 2D]

When displaying composite video, the ADVC-300 separates the luminance (Y) and chrominance (C) signals based on the scanning lines above and below.

[Y/C Separation 3D]

When displaying composite video, the ADVC-300 compares the current frame with the previous one using the Motion Detection circuit and separates Y/C signals in the areas determined to be still images. In this mode, Y/C signals are separated more effectively than in the 2D mode.

• 3D Noise Reduction

Removes noise from each of the luminance (Y) and chrominance (C) signals after comparing the current frame with the previous one.

[Y Signal]

Allows you to set the noise reduction level for the luminance (Y) signal.

[C Signal]

Allows you to set the noise reduction level for the chrominance (C) signal.

• 2D Noise Reduction

Removes noise by blurring the entire image uniformly by using the built-in filter.

[Y Signal]

Allows you to set the noise reduction level for the luminance (Y) signal.

[C Signal]

Allows you to set the noise reduction level for the chrominance (C) signal.

• 3D Y/C Separation

[Motion Detection]

Allows you to adjust the sensitivity of the Motion Detection circuit when [Y/C Separation 3D] has been selected.

Tip

Digital 3D Y/C separation

The composite signal is a mix of the luminance (Y) and chrominance (C) signals. To compress the composite signal to the DV format, the luminance (Y) and chrominance (C) signals needs to be separated each other. For doing this separation, two methods are available.

- 2D Y/C separation
  In this method, Y/C signals are separated using the vertical relationship of a dot. Although this method produces color noise when a dot has little relationship with the upper and lower dots such as the case of a slanted white line on the black background, it is widely accepted recent years because this method can work with a higher resolution screen.
- 3D Y/C separation
  In this method, Y/C signals are separated based on the time relationship of dots displayed at the same spot. This method enables you to obtain the highest quality of image among the available methods today. In this method, still pictures, which have strong relationship in the time axis, are processed using the time axis, and motion pictures, which have weak relationship in the time axis, are processed using the relationship with the scanning lines above and below (2 dimensions.). This method requires a digital frame buffer and motion detection mechanism.

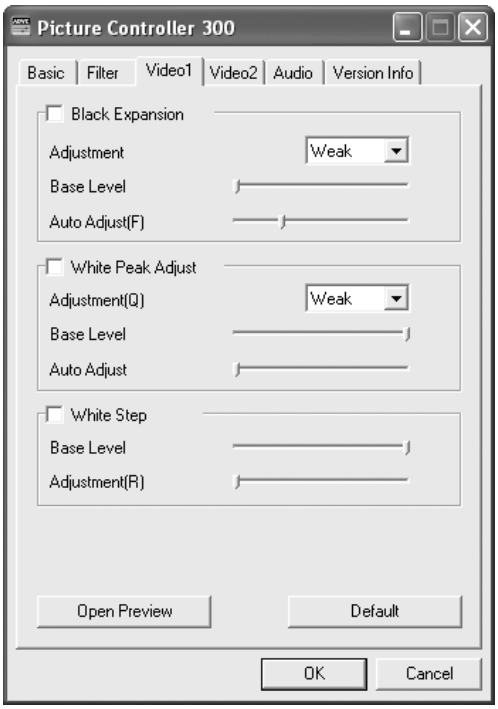
Digital 3D Noise Reduction

In a conventional method, noise is reduced by lowering the frequency characteristics for the entire picture (blurring) in one or two-dimensions. This method has a problem in affecting other parts not containing noise. The digital 3D noise reduction feature employed by ADVC-300, however, removes noise after detecting noise using the characteristic of noise (noise has little relation to others in the time axis), the advert effect to the image is kept minimal.

* Because of the construction, it is not a universal solution for all noises.

[Video1] tab

This tab page is provided to set the correction for color graduation. If this correction is enabled for a video having black or white crushes, the video is adjusted and become clear and crisp.



- **Black Expansion**

  Corrects grayish black by correcting the gain of black (low brightness) areas and thereby enhancing their blackness.

  [Adjustment]

  Allows you to set the level of black expansion. The higher the value, the deeper the black will be.

  [Base Level]

  Allows you to specify up to which level of brightness you want to enhance the black. The more the cursor is moved to the right, the higher (brighter) the bright level will be.

  [Auto Adjust]

  Adjusts the level of black expansion based on the average brightness of the incoming video.

Tip

We recommend setting this to [Middle] or [Strong] because you may not recognize the effect of this setting if it has been set to [Weak].

NOTE

If the cursor is set to the far right when [Adjustment] has been set to [Weak] or [Middle], the screen image may become whitish because of insufficient correction.

- **White Peak Adjust**

  Corrects a whiteout image by correcting the gain of white (high brightness) areas and thus restoring the contrast in them.

  [Adjustment]

  Allows you to set the level of white peak adjustment. The higher the level, the lower the white peak will be.

  [Base Level]

  Allows you to specify up to which level of brightness you want to correct the white peak. The more the cursor is moved to the left, the lower (darker) the bright level will be.

  [Auto Adjust]

  Adjusts the level of white peak based on the average brightness of the incoming video.

- **White Step**

  Lowers the luminance signal level when the incoming video has a higher level of the average brightness to enhance the reproducibility of graduation in brighter areas.

  [Base Level]

  Allows you to specify up to which level of brightness you want to lower the luminance signal as correction. The more the cursor is moved to the left, the lower (darker) the bright level will be.

  [Adjustment]

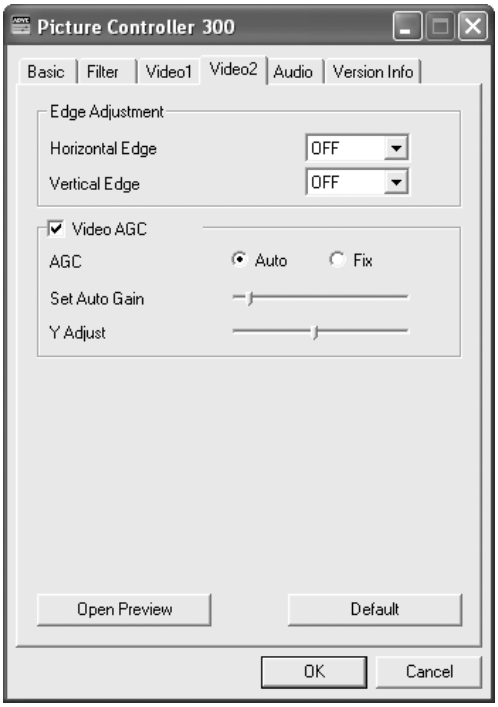
  Adjusts the level of white graduation correction based on the average brightness of the incoming video.

Tip

This feature is effective for images with white spreading over the screen.

[Video2] tab

This tab page is provided to sets up the edge correction and AGC.



- **Edge Adjustment**

  Corrects the edge of human or object profiles in videos.

  [Horizontal Edge]

  Corrects horizontal edges in video. Vertical edges are thus enhanced.

  [Vertical Edge]

  Corrects vertical edges in video. Horizontal edges are thus enhanced.

- **Video AGC**

  Sets up the AGC feature for video in detail. Checkmark this option if you want to automatically set the brightness of the entire video to an optimal level.

  [AGC]

  If [Auto] is checkmarked, the brightness of the entire video will be automatically adjusted. When [Fix] is checkmarked, the brightness of the entire video will be adjusted using the fixed value.

  [Set Auto Gain]

  Allows you to set the automatic adjustment level of AGC if [AGC] has been set to [Auto]. The more the cursor is moved to the right, the higher the level for AGC will be, thereby making the video less bright.

  [Y Adjust]

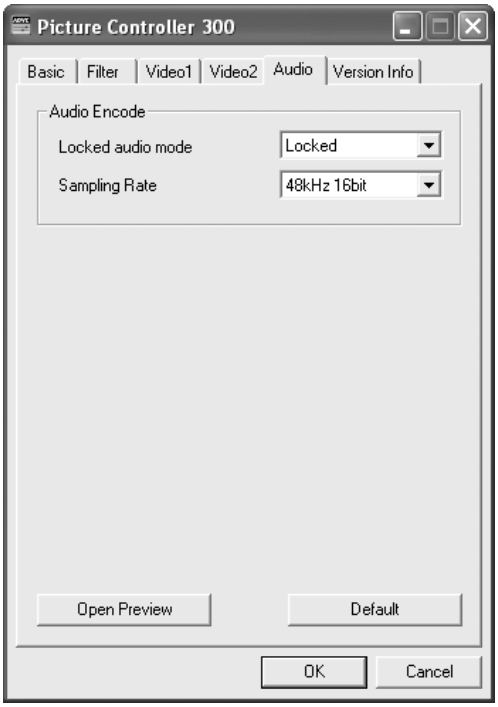
  Allows you to set the fixed brightness level of AGC if [AGC] has been set to [Fix], The more the cursor is moved to the right, the more (brighter) the gain will be.

Tip

AGC is an acronym of "Auto Gain Control" and the function to automatically adjust the image graduation and such. Using this feature, you can always display the video in an optimal brightness level even if the video input to display change every time.

[Audio] tab

Sets the sampling rate and the Locked Audio mode.



NOTE

This switch is effective only for analog inputs.

Tip

This setting cannot be altered in the UNIT mode.

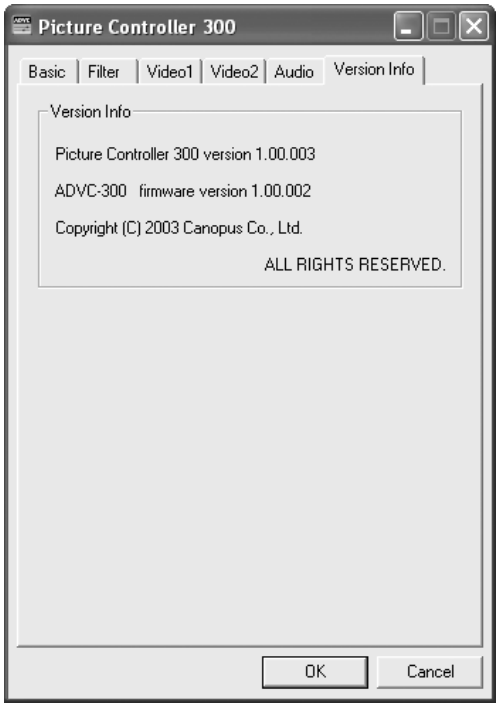
- **Audio Encode**

[Locked audio mode]
Allows you to select whether to use the Locked Audio mode or not.

[Sampling Rate]
Allows you to select an audio frequency.
[48kHz 16bit]
Audio data will be processed as 16-bit stereo sound at 48 kHz. Select this option when you want to create DVD videos.
[32kHz 12bit]
Audio data will be processed as 4-channel 12-bit data at 32 kHz. ADVC-300 processes only the main 2 channels and no sound is recorded in the 2 sub-channels.

[Version Info] tab

This tab page shows the version information of Picture Controller 300.



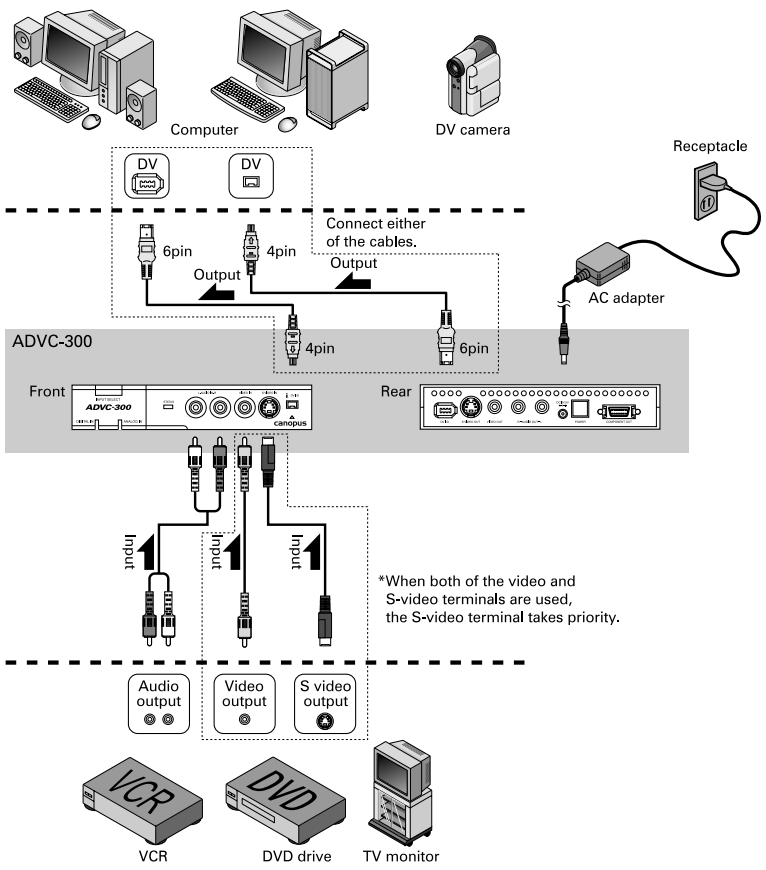
Connecting ADVC-300

NOTE

Before connecting/disconnecting a DV cable, be sure to turn OFF the power of your computer and ADVC-300.

Analog video input

Make connections between devices as shown in the figure.



Capturing analog video into computer

1. **Press the [POWER] switch on the rear.**

2. **By pressing the [INPUT SELECT] switch on the front, switch the input mode to the ANALOG IN external input mode.**
   > The ANALOG IN LED will light.

3. **Playback the video you want to capture on the analog VCR.**

4. **Capture the video on your computer.**
   > For how to capture the video on your computer, consult the user's manual of the software you are using.

Recording analog video to DV camera

1. **Press the [POWER] switch on the rear.**

2. **By pressing the [INPUT SELECT] switch on the front, switch the input mode to the ANALOG IN external input mode.**
   > The ANALOG IN LED will start light.

3. **Put the DV camera in the record pause mode.**

4. **Playback the video you want to copy on the analog VCR.**

5. **Release the pause button of the DV camera.**
   > The analog video will be copied to the DV camera.

NOTE

Do not turn ON/OFF the ADVC-300 power when the computer connected to the ADVC-300 via a DV cable is OFF or in the standby mode. Otherwise, your computer may become unbootable depending on the OHCI card being used. In this instance, disconnect the ADVC-300 from the computer temporarily, turn OFF and ON the power of the computer, and then connect the ADVC-300 to the computer again.

Tip

Audio sampling frequency during capturing

In Line input selection: You can select from 48 kHz (16-bit) and 32 kHz (12-bit). Select this setting using the DIP switch or "Picture Controller 300".

NOTE

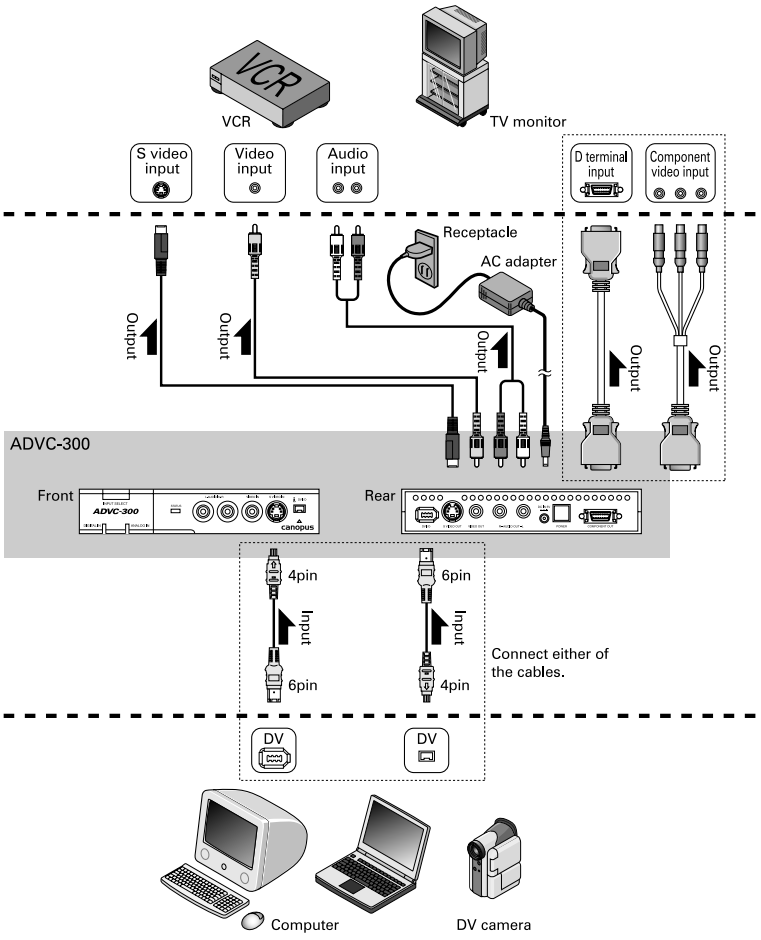
Before connecting/disconnecting a DV cable, be sure to turn OFF the power of your computer and ADVC-300.

NOTE

Do not turn ON/OFF the ADVC-300 power when the computer connected to the ADVC-300 via a DV cable is OFF or in the standby mode. Otherwise, your computer may become unbootable depending on the OHCI card being used.

Digital video input

Make connections between devices as shown in the figure.



Watching digital video on TV monitor

1 **Press the [POWER] switch on the rear.**

2 **By pressing the [INPUT SELECT] switch, switch the input mode to DIGITAL IN.**

> The DIGITAL IN LED will light.

3 **Output your desired digital video from the computer (or DV camera).**

> The digital video will be displayed on the TV monitor.

* For how to output digital video on your computer, consult the user's manual of the software you are using.

Recording digital video to analog VCR

1 **Press the [POWER] switch on the rear.**

2 **By pressing the [INPUT SELECT] switch, switch the input mode to DIGITAL IN.**

> The DIGITAL IN LED will light.

3 **Put the analog VCR in the record pause mode.**

4 **Playback the video you want to copy on the DV camera.**

5 **Release the pause button of the analog VCR.**

> The digital video is recorded to the analog VCR.

Technical Information

Priorities among analog input signals

When all the connectors are used at the same time, priority is given in the order shown below:

- **Video**
  1. **S-video input**
  2. **Composite input**

Audio modes

48kHz/16-bit mode

In this mode, audio data is recorded as 16-bit stereo sound at 48 kHz. Select this option when you create DVD videos.

32kHz/12-bit mode

In this mode, 4 channels of 12-bit audio signals are recorded at 32kHz. When ADVC-300 is used for recording, audio data is recorded in only the 2 main channels and no sound is recorded in the 2 sub-channels.

Unlocked mode

Unlocked audio in consumer products are allowed to have some deviation in the number of audio samples per one video frame. If this deviation is accumulated along with elapsed time, however, it results in sound drift. On the other hand, the Locked Audio mode ensures synchronization between audio and video by restricting the number of audio samples per one video frame in accordance with a preset pattern, thereby sound drift does not take place. When the Locked Audio mode is used for capturing from a video source with highly irregular signals such as game machines, however, the recorded sound may contain noises because incoming signals exceed the limit for regulating the number of audio samples in accordance with the locked audio pattern. For that reason, we made the Unlocked mode available for your use.

Copyright protection feature

This product supports copyright protection technologies such as copy-prevention technology. If the ADVC-300 receives data with copy-prevention signals attached, it outputs the data with extremely low brightness and contrast. The STATUS LED will light to indicate this.

Specifications

Video signal formats			NTSC(0IRE), NTSC(7.5IRE), SECAM*, PAL
DV	Front terminals		4-pin iLINK Connector
	Rear terminals		6-pin iLINK Connector
Analog Video	Front terminal	Input	S-Video(MiniDIN 4 Pin)x1 RCA jack Compositex1
	Rear terminal	Output	S-Video(MiniDIN 4 Pin)x1 RCA jack Compositex1
Analog Audio	Data		48kHz 16bit 2ch 32kHz 12bit 4ch (ADVC-300 processes only the main 2 channels and not other 2 sub-channels.)
	Front terminal	Input	RCA jack x2(L/R)
	Rear terminal	Output	RCA jack x2(L/R)
Component video	Rear terminal	Output	D connector (D1) x 1
Power supply			AC adapter
Power consumption			Max. 9W 0.5W in the standby mode
Ambient temperature			0 to 45°C
External dimensions (excluding protrusions)			146 (W) x 27.2 (H) x 175 (D)
Weight			430g

* When the SECAM format is used, the SECAM format is used just for inputs, and PAL is used for analog video outputs.

Troubleshooting

If you have found any troubles, check the following points before contacting us for repair.

Symptoms		Cause/Action
Pressing the POWER switch does turn ON the ADVC-300 power.	>	Check that the AC adapter is connected to the DC IN 5V connector and the receptacle.
Video and audio are not output.	>	Check if the POWER switch is ON. Check that this product and DV/analog devices are properly connected.
It cannot record.	>	If the video input or audio data contains copyright protection signals, it cannot be recorded properly.
Color bars are not displayed.	>	The [INPUT SELECT] switch needs to be pressed for 3 seconds or more without a break.
The buttons on the ADVC-300 are not operable.	>	The mode selection [SW1] DIP switch No .8 is set to ON. In this mode, the ADVC-300 is operable only from the computer.